

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Joerg HAGER

Application No.: [NEW]

Filed: herewith

For: COMPOSITIONS AND METHODS FOR GENETIC ANALYSIS

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination of the above-identified application, please amend the application as follows:

IN THE CLAIMS:

Please cancel claims 1-22.

Please add the following new claims 23-53.

23. A method for the identification, isolation, or separation of identical nucleic acid fragments from a mixture of at least two nucleic acid populations, comprising:

- (a) separately digesting the nucleic acids of said populations with at least one restriction enzyme;
- (b) ligating an adaptor sequence to the restriction fragments;
- (c) amplifying the adaptor-ligated restriction fragments generated in step (a) and in step (b) using an adaptor-specific primer;
- (d) hybridizing the amplification products from the different nucleic acid populations with each other; and
- (e) identifying, isolating, or separating the fully-matched heterohybrid fragments.

24. The method of claim 23, wherein said nucleic acid populations comprise genomic DNA populations.

25. The method of claim 24, wherein said nucleic acid populations comprise human genomic DNA populations.